

5 Hazardous Waste Research

Field Research at Selected Installations

Hazardous waste management is an issue of concern at nearly every military installation. These wastes are generated as the result of weapons development, weapons maintenance, and other more "industrial" type processes that are necessary operations for bases. In addition, hazardous wastes are generated via Installation Restoration (IR) Programs, which are responsible for cleanup of contaminated sites on installations. Wastes may be RCRA and/or CERCLA regulated and non-regulated (e.g., off-spec fuels) wastes. Bases also must comply with state and local hazardous waste handling regulations, and with federal and state department of transportation requirements for shipping of these wastes (manifesting requirements). Storage locations, storage times, labeling, and submittal schedules for disposal documentation are important issues in the management of hazardous wastes. There are several potential benefits of using a CADD/GIS for management of this information. These include the generation of real-time snap shots of the types stored on site and the locations of various hazardous wastes, and the integration of this system with an automated manifesting process.

EPA's Hazardous Waste Management Module

Baker reviewed EPA's Envirofacts Warehouse Resource Conservation and Recovery Information System (RCRIS) module. This system maintains hazardous waste management information on approximately 700,000 facilities regulated by the USEPA and/or state regulatory agencies. The RCRIS data model structure information was available from the Envirofacts Warehouse, as well as in a downloadable form from the EPA's Environmental Data Registry (EDR) at <http://www.epa.gov/edr>. The RCRIS module data-structure was evaluated for its potential adaptation of components within the TSFMS. Because its table structure was somewhat similar to the TSSDS, the RCRIS was used as the primary source of attributes for the TSFMS.

DESCIM Data Models

The following two DESCIM data models were reviewed and evaluated:

- a. HSMO0015.pdf *Unnamed*
- b. HSMO0055.pdf *Unnamed*

Review of these models revealed many attributes that did not have equivalents from the EPA's RCRIS data structure. This is due essentially to the fact that the EPA's model is intended for use for track facility permit or closure status, compliance with Federal and State

regulations, and cleanup activities. These attributes are included in the proposed data structure.

Patuxent River ENRMS Module of the APMM

Pax River's ENRMS module was reviewed with respect to hazardous waste management. Items identified as potentially applicable were included in the proposed TSFMS.

Other Information Sources

Baker also reviewed the following documents to identify data elements for potential inclusion into the TSFMS. These documents include the following:

- a.* U.S. Army, Alaska. Environmental Handbook.